National Institute of Environmental Health Sciences

Relationship between the seasonal onset of chronic venous leg ulcers and climatic factors

Author(s): Klode J, Stoffels I, Korber A, Weindorf M, Dissemond J
Year: 2011
Journal: Journal of The European Academy of Dermatology and Venereology : Jeadv. 25 (12): 1415-1419

Abstract:

BACKGROUND: There have been reports indicating seasonal differences in the onset of chronic leg ulcers. The reasons for such seasonal fluctuations are not well understood. Therefore we decided to examine the seasonal incidence of chronic leg ulcers in our patient population, caused by chronic venous insufficiency (CVI) or mixed arterial and venous disorders, for any correlation with climatic factors. METHODS: We retrospectively analysed the data of 183 patients with chronic leg ulcers, evaluated the monthly and seasonal onset of the leg ulcers and investigated correlations between the incidence and climatic factors. RESULTS: The onset of chronic leg ulcers showed significant seasonal fluctuations with a decrease in summer and an increase in autumn-winter. The ulcer onset in the cold months, autumn and winter, was significantly higher (P Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 0.026) compared with spring and summer. Furthermore, in the bivariate correlation analysis of the variables temperature and ulcer onset, there was a statistically significant negative correlation between temperature and new ulcer onset. The colder the temperature was, the higher was the new ulcer onset with a correlation coefficient of -0.613 (P Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 0.034). CONCLUSION: The onset of chronic leg ulcers caused by CVI and mixed arterial and venous disorders in our patient population showed significant seasonal variations and demonstrated an inverse relationship to temperature. In summary, climatic factors appear to play an important role in the onset of chronic leg ulcers. Climatic factors may therefore need consideration in future clinical investigations and in the development of prophylactic therapeutic strategies.

Source: http://dx.doi.org/10.1111/j.1468-3083.2011.03988.x

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Germany

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Dermatological Effect

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): Hypertension;Chronic venous leg ulcers

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified